REMARKS

Claims 8-11, 14, and 19-20 were pending at the time of the Office Action. In this Amendment, claims 8 and 19 have been amended to clarify an aspect of the invention. Support is found in, for example, FIG. 6 and corresponding descriptions. Care has been undertaken not to introduce new matter. Claims 8-11, 14 and 19-20 are currently pending for examination, of which claims 8 and 19 are independent. Care has been exercised not to introduce new matter.

Claims Rejections under 35 U.S.C. § 112

Claims 8-11, 14 and 19-20 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, because the limitations of claims 8 and 19 regarding "said two (222) peaks includes a first peak having an intensity (I1) and a second peak having an intensity (I2) and the ratio (I1/I2) of the intensity (I1) of said first peak to the intensity (I2) of said second peak is around 0.5 **excluding 0.46**" is not supported by the original disclosure as filed.

In response, the limitations "excluding 0.46" which is indicated as lacking support in the application-as-filed," has been removed. In addition, the changed limitations of claims 8 and 19, "said two (222) peaks includes a first peak having an intensity (I1) and a second peak having an intensity (I2) and the ratio (I1/I2) of the intensity (I1) of said first peak to the intensity (I2) of said second peak is at least 0.48 around 0.5," has a sufficient support. As illustrated in FIG. 6, the cell output (Pmax), which is represented by a square mark "□," varies according to change of the peak intensity ratio (I1/I2), which is the ratio of the intensity (I1) of the first peak to the intensity (I2)of the second peak. The cell output (Pmax) has a maximum value when the peak intensity ratio (I1/I2) is around 0.5. (See page 26, lines 6-14 of the application-as-filed)

In view of above amendments to claims 8 and 19 and the remarks, the rejection is respectfully traversed.

Claim Rejections Under 35 U.S.C. §103(a)

Claims 8-11, 14, and 19-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Vink et al. ("On the homogeneity of sputter-deposited ITO films ...microstructure" - Thin Solid Films 266 (1995) pp145-151, hereinafter "Vink") and Adurodija et al. ("Effect of Sn doping on the electronic transport mechanism of indium-tin-oxide films grown by pulsed laser deposition coupled with substrate irradiation" - J. Appl. Phys. 88 (2000) pp 4175-4180, hereinafter "Adurodija"). Supporting evidence is provided by Neerinck et al. ("Depth profiling of thin ITO films by grazing incidence X-ray diffraction" - Thin Solid Films 278 (1996) pp12-17, hereinafter "Neerinck"). The rejection is respectfully traversed for the following reasons.

The proposed combination of AAPA, Vink, Adurodija and Neerinck fails to disclose the limitations of claims 8 and 19 regarding "the ratio (I1/I2) of the intensity (I1) of said first peak to the intensity (I2) of said second peak is at least 0.48 and around 0.5."

Neerinck's doublet-type peak of the ITO film allegedly has two peaks, of which intensities are 2.5 (I1) and 5.5(I2) respectively. The ratio of the two intensities (I1/I2) is **0.4545** as alleged by the Examiner. (See Neerinck's FIG. 1) In contrast, amended claims 8 and 19 require "the ratio (I1/I2) of the intensity (I1) of said first peak to the intensity (I2) of said second peak" to be "**at least 0.48 and around 0.5.**" Neerinck does not disclose the range of the ratio (I1/I2) of intensities of the two peaks as required by claims 8 and 19.

In addition, AAPA, which was cited for the substrate and the first and second amorphous silicon layers, Vink, which was cited for the indium oxide layer, and Adurodija, which was cited for the carrier concentration, fail to cure deficiencies of Neerinck.

Accordingly, as each and every limitation must be disclosed or suggested by the cited prior art references in order to establish a *prima facie* case of obviousness (*see*, M.P.E.P. § 2143.03) and for at least the foregoing reasons the proposed combination of AAPA, Vink, Adurodija and Neerinck fails to do so, it is respectfully submitted that claims 8 and 19 and the claims dependent thereon are patentable over the combination of AAPA, Vink, Adurodija and Neerinck.

Conclusion

In view of the above amendments and remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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